# **Australian Bureau of Statistics**

# 6354.0 - Job Vacancies, Australia, Nov 2007

Previous ISSUE Released at 11:30 AM (CANBERRA TIME) 09/01/2008

# **Summary**

# **Main Features**

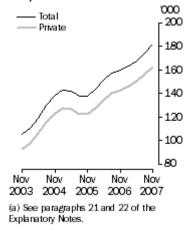
## **NOVEMBER KEY FIGURES**

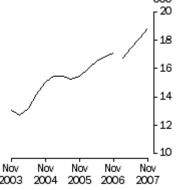
	<b>November 2007</b> '000	Aug 2007 to Nov 2007 % change	Nov 2006 to Nov 2007 % change
Trend estimates			
Private sector	162.9	4.2	(a)14.1
Public sector	18.9	4.0	(a)np
Private and public sectors	181.8	4.2	13.7

np not published due to break in series

(a) See paragraphs 21 and 22 of the Explanatory Notes.

Job Vacancies, Total and Private sector(a): Trend Job Vacancies, Public sector(a): Trend





(a) Break in series. See paragraphs21 and 22 of the Explanatory Notes.

#### **NOVEMBER KEY POINTS**

## TREND ESTIMATES

- Total job vacancies in November 2007 were 181,800, an increase of 4.2% from August 2007.
- The number of job vacancies in the private sector was 162,900 in November 2007, an increase of 4.2% from August 2007.
- The number of job vacancies in the public sector was 18,900 in November 2007, an increase of 4.0% from August 2007.

#### **NOTES**

#### **FORTHCOMING ISSUES**

**ISSUE (QUARTER)** 

February 2008 May 2008 Release Date 27 March 2008 26 June 2008

#### **SAMPLING ERROR**

For information on sampling error, including standard errors for original estimates contained in this publication, see the Technical Note.

#### **CHANGES IN THIS ISSUE**

The ABS has implemented an improved method of producing seasonally adjusted estimates for the Job Vacancies Survey (JVS), through the application of Autoregressive Integrated Moving Average (ARIMA) modelling techniques. JVS now uses concurrent seasonal adjustment with ARIMA modelling, which reduces the level of revisions to seasonally adjusted and trend estimates when subsequent data become available. See paragraph 25 of the Explanatory Notes for more information on the ARIMA modelling technique.

## **INQUIRIES**

For further information about these and related statistics, contact the National Information and Referral Service on 1300 135 070 or Jennifer Gaudie on Perth (08) 9360 5243.

# **Tables**

#### **TABLES**

## 1. JOB VACANCIES, States and territories

				C	Origina	ıl				Seasonally Adjusted	Trend	
	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Australia	•	Australia	
				VA	CANC	IES ('00	0)					
2006												
August	42.5	31.6	39.8	9.0	22.6	2.3	2.6	4.7	155.0	154.8	156.9	
November	47.7	31.6	38.8	9.4	23.9	2.5	2.7	4.5	161.1	162.1	159.9	
2007												
February	48.2	32.1	38.7	9.9	25.0	2.5	2.5	4.8	163.7	160.8	163.0	
May	51.9	31.8	35.6	10.2	27.0	2.3	2.4	5.3	166.5	168.6	168.0	

August November	51.7 55.5	31.6 36.1	38.5 37.3	10.0 9.4	29.7 32.6	2.8 2.6	2.8 3.5	6.1 5.9	173.1 182.8	173.1 183.4	174.4 181.8
CHANGE FROM PREVIOUS QUARTER (%)											
2006											
August	1.9	-3.6	8.3	-16.2	6.2	-6.6	8.4	18.3	2.0	0.5	3.8
November	12.1	0.1	-2.5	4.1	6.0	10.2	5.4	-3.9	3.9	4.7	1.9
2007											
February	1.2	1.7	-0.4	5.3	4.8	1.3	-7.6	6.0	1.7	-0.8	1.9
May	7.6	-0.9	-8.0	2.9	7.7	-9.6	-4.3	11.9	1.7	4.9	3.1
August	-0.5	-0.7	8.2	-1.8	10.2	19.7	15.5	14.9	4.0	2.7	3.8
November	7.4	14.2	-3.2	-6.3	9.6	-6.9	28.0	-2.8	5.6	6.0	4.2
	CHANG	E FROI	M CORF	RESPON	NDING	QUAR	TER OF	PREVIO	OUS YEAR	(%)	
2005											
November	0.1	-11.5	-16.2	17.2	20.7	12.7	-23.7	11.7	-3.3	-3.7	-0.2
2006											
November	5.1	4.7	61.2	7.4	51.0	7.1	28.0	13.7	21.5	20.9	15.7
2007											
November	16.4	14.2	-4.0	-0.2	36.3	2.0	30.7	32.5	13.5	13.1	13.7

# 2. JOB VACANCIES, Private sector - States and territories

	Original Seasonally Adjusted							Trend			
	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Australia	•	Australia
				VA	CANCI	ES ('000	0)				
2006											
August	38.0	28.8	36.5	8.2	21.4	1.8	1.5	2.5	138.8	138.6	140.0
November	43.1	28.2	34.8	8.6	22.5	2.3	1.6	2.6	143.6	145.0	142.8
2007 February(a)	43.8	28.6	35.2	9.1	23.7	2.2	1.6	2.8	147.1	143.9	146.2
May	47.5	28.5	31.8	9.5	25.1	*2.0	1.5	3.3	147.1	151.3	150.5
August	47.3	28.0	34.4	9.3	28.2	*2.3	2.0	3.7	155.0	155.0	156.3
November	50.6	32.9	32.8	8.6	30.2	2.1	2.5	3.8	163.4	164.4	162.9
		(	CHANG	E FROM	/I PRE\	/IOUS (	QUARTI	ER (%)	)		
2006											
August	1.7	-3.0	11.6	-14.5	8.2	-8.1	6.7	26.4	3.2	1.5	3.9
November	13.4	-1.9	-4.8	4.6	5.4	22.6	5.1	0.3	3.5	4.6	2.0
2007											
February(a)	1.6	1.3	1.4	5.8	5.3	-0.5	-3.0	10.6	2.4	-0.8	2.3
May	8.5	-0.4	-9.8	4.1	5.7	-10.1	-3.5	17.8	1.4	5.2	3.0
August	-0.9	-1.6	8.1	-1.8	12.4	16.1	30.5	11.6	3.9	2.5	3.8
November	7.3	17.3	-4.5	-7.3	7.2	-9.0	25.3	1.4	5.4	6.0	4.2
	CHANG	E FROM	I CORR	ESPON	IDING	QUART	ER OF	PREVI	OUS YEAR	(%)	
2005											
November	-0.3	-12.5	-19.1	28.9	26.8	12.2	-37.0	15.3	-3.6	-3.9	-0.6
2006	2.0	4.0	64.0	0.4	EE O	10.0	41.0	22.0	22.5	01.0	1.0 4
November 2007	3.0	4.8	64.3	9.4	55.3	19.3	41.3	32.0	22.5	21.9	16.4
November	17.3	16.4	-5.6	0.2	34.0	-5.6	53.1	47.5	13.8	13.4	14.1

<sup>\*</sup> estimate has a relative standard error of 25% to 50% and should be used with caution (a) See paragraphs 21 and 22 of the Explanatory Notes.

# 3. JOB VACANCIES, Public sector - States and territories

	Original Seasonally Adjusted						Trend				
	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Australia	Australia	Australia
				VA	CANCII	ES ('000	))				
2006											
August	4.5	2.8	3.3	8.0	1.2	0.4	1.0	2.1	16.2	16.2	16.9
November	4.6	3.4	4.0	8.0	1.4	0.3	1.1	1.9	17.4	17.1	17.1
2007											
February(a)	4.4	3.5	3.4	8.0	1.3	0.3	0.9	1.9	16.7	16.9	16.8
May	4.4	3.4	3.8	0.7	1.9	0.3	0.9	2.0	17.3	17.3	17.5
August	4.5	3.6	4.1	0.7	1.6	0.4	8.0	2.4	18.1	18.1	18.1
November	4.9	3.2	4.4	8.0	2.4	0.4	1.0	2.2	19.4	19.0	18.9
			CHANG	SE FROI	M PREV	'IOUS Q	UARTE	R (%)			
2006											
August	3.4	-10.0	-18.7	-30.0	-20.1	0.5	11.0	9.9	-7.3	-7.3	2.2
November	1.2	20.3	23.2	-1.2	16.9	-42.1	5.8	-8.9	7.8	5.7	1.2
2007											
February(a)	np	np	np	np	np	np	np	np	np	np	np
May	-1.7	-5.2	10.9	-10.1	43.2	-5.9	-5.6	3.4	3.6	2.1	4.1
August	4.1	7.0	9.0	-1.1	-18.0	46.1	-11.3	20.3	4.8	5.0	3.9
November	7.8	-10.3	7.9	7.3	53.3	5.1	35.1	-9.3	7.0	4.8	4.0
	CHANG	SE FRO	M CORF	RESPO	NDING (	QUARTI	ER OF F	PREVIO	OUS YEAR	(%)	
2005											
November	5.1	-3.0	12.8	-34.5	-21.2	15.1	2.1	8.5	-1.2	-1.8	2.8
2006					_		_				
November	29.9	4.0	39.0	-9.8	4.3	-44.1	11.9	-3.9	13.8	13.6	10.2
2007											
November(a)	np	np	np	np	np	np	np	np	np	np	np

# 4. JOB VACANCIES, Industry: Original

	20	006		2	007	
	August	November	February	May	August	November
	'000	'000	'000	'000	'000	'000
Mining	3.9	3.8	4.4	5.0	4.8	5.2
Manufacturing	16.0	14.8	17.1	16.0	15.2	16.7
Electricity, gas and water supply	0.9	0.7	1.1	0.9	1.1	1.0
Construction	*5.4	6.6	7.9	7.2	8.6	6.9
Wholesale trade	10.1	9.6	10.3	7.6	10.5	7.2
Retail trade	28.5	27.6	26.7	28.5	30.1	35.5
Accommodation, cafes and restaurants	7.5	12.1	10.0	9.9	7.6	12.7
Transport and storage	3.1	3.9	4.5	4.2	4.0	4.9
Communication services	1.3	1.4	1.7	*1.8	*2.8	*3.0
Finance and insurance	8.0	7.7	8.3	9.4	8.3	9.4
Property and business services	35.2	35.7	36.6	40.5	45.2	41.1
Government administration and defence	7.9	8.3	8.0	7.8	8.1	8.2
Education	4.8	3.9	3.9	4.3	4.4	5.2
Health and community services	12.6	14.3	15.5	14.2	14.0	15.2
Cultural and recreational services	4.7	4.6	2.3	3.4	3.4	5.1
Personal and other services	5.0	*6.1	5.3	*5.9	5.2	5.5

np not published due to break in series (a) Break in series between November 2006 and February 2007. See paragraphs 21 and 22 of the Explanatory Notes.

All industries 155.0 161.1 163.7 166.5 173.1 182.8

# **About this Release**

Merger of: 6231.0 and 6330.0

Contains estimates of the number of job vacancies with state and territory and industry dissections.

The publication of the Job Vacancy Rate ceased from November 2003. For further information please contact Perth on (08) 9360 5357.

# **Explanatory Notes**

# **Explanatory Notes**

## **EXPLANATORY NOTES**

#### INTRODUCTION

**1** This publication contains quarterly estimates of job vacancies based on information obtained from a sample survey of employers.

## **CONCEPTS, SOURCES AND METHODS**

**2** Descriptions of the underlying concepts of Australia's job vacancies statistics, and the sources and methods used in compiling these estimates, are presented in **Labour Statistics: Concepts, Sources and Methods** (cat. no. 6102.0.55.001).

#### SCOPE AND COVERAGE

**3** All job vacancies (as defined in the Glossary) for wage and salary earners are represented in the Job Vacancies Survey (JVS), except those:

- in the Australian permanent defence forces
- in businesses primarily engaged in agriculture, forestry and fishing
- in private households employing staff
- in overseas embassies, consulates, etc.
- located outside Australia.
- 4 The sample for the JVS, like most Australian Bureau of Statistics (ABS) business surveys,

<sup>\*</sup> estimate has a relative standard error of 25% to 50% and should be used with caution

is selected from the ABS Business Register which is primarily based on registrations to the Australian Taxation Office's (ATO) Pay As You Go Withholding (PAYGW) scheme (and prior to 1 June 2000 the Group Employer scheme). The population is updated quarterly to take account of:

- new businesses
- businesses which have ceased employing
- changes in employment levels
- changes in industry
- other general business changes.

**5** The estimates include an allowance for the time it takes newly registered businesses to be added to the survey population.

**6** Businesses which have ceased employing are identified when the ATO cancels their PAYGW registration. In addition, businesses which did not remit under the PAYGW scheme for the previous five quarters are removed from the frame.

## **SURVEY METHODOLOGY AND DESIGN**

**7** A sample of approximately 5,000 employers is selected from the ABS Business Register to ensure adequate state and industry representation. The sample is updated each quarter to reflect changes in the ABS Business Register. These changes arise from the emergence of new businesses, takeovers and mergers, changes to industry classification, changes in the number of employees, and businesses which have ceased operations. Such updating of the register can contribute to changes in the estimates of job vacancies.

**8** The statistical unit for the survey comprises all the activities of an employer in a particular state or territory based on the Australian Business Number (ABN) unit or Type of Activity Unit (TAU) (see paragraphs 11 and 15 of the Explanatory Notes). Each statistical unit is classified to an industry which reflects the predominant activity of the business. The statistical units are stratified by state, industry division and employment size, and within each stratum, statistical units are selected with equal probability.

## STATISTICAL UNITS DEFINED ON THE ABS BUSINESS REGISTER

**9** The ABS uses an economic statistics units model on the ABS Business Register to describe the characteristics of businesses, and the structural relationships between related businesses. The units model is also used to break groups of related businesses into relatively homogeneous components that can provide data to the ABS.

10 In mid-2002, to better use the information available as a result of The New Tax System, the ABS changed its economic statistics units model. The new units model allocates businesses to one of two sub-populations. The vast majority of businesses are in what is called the ATO Maintained Population, while the remaining businesses are in the ABS Maintained Population. Together, these two sub-populations make up the ABS Business Register population.

## **ATO Maintained Population**

11 Most businesses and organisations in Australia need to obtain an Australian Business Number, and are then included on the ATO Australian Business Register. Most of these businesses have simple structures; therefore the unit registered for an ABN will satisfy ABS statistical requirements. For these businesses, the ABS has aligned its statistical units structure with the ABN unit. The businesses with simple structures constitute the ATO Maintained Population, and the ABN unit will be used as the economic statistics unit for all economic collections.

## **ABS Maintained Population**

- **12** For the population of businesses where the ABN unit is not suitable for ABS statistical requirements, the ABS maintains its own units structure through direct contact with the business. These businesses constitute the ABS Maintained Population. This population consists typically of large, complex and diverse businesses. The new statistical units model described below has been introduced to cover such businesses.
- 13 Enterprise Group: This is a unit covering all the operations in Australia of one or more legal entities under common ownership and/or control. It covers all the operations in Australia of legal entities which are related in terms of the current Corporations Law (as amended by the Corporations Legislation Amendment Act 1991), including legal entities such as companies, trusts, and partnerships. Majority ownership is not required for control to be exercised.
- **14** Enterprise: The enterprise is an institutional unit comprising (i) a single legal entity or business entity, or (ii) more than one legal entity or business entity within the same Enterprise Group and in the same institutional subsector (i.e. they are all classified to a single Standard Institutional Sector Classification of Australia subsector).
- **15** Type of Activity Unit: The TAU comprises one or more business entities, sub-entities or branches of a business entity within an Enterprise Group that can report production and employment data for similar economic activities. When a minimum set of data items is available, a TAU is created which covers all the operations within an industry subdivision (and the TAU is classified to the relevant subdivision of the Australian and New Zealand Standard Industrial Classification [ANZSIC]). Where a business cannot supply adequate data for each industry, a TAU is formed which contains activity in more than one industry subdivision.
- **16** For more information on the impacts of the introduction of the new economic statistics units model, refer to **Information Paper: Improvements in ABS Economic Statistics** [Arising from The New Tax System] (cat. no. 1372.0).

- 17 Job vacancies series in this publication were introduced with the November 1983 issue of the Job Vacancies and Overtime survey publication. Estimates contained in this publication are not strictly comparable with those obtained prior to November 1983.
- **18** Between August and November 1999 a number of improvements were made to operational procedures, in conjunction with the discontinuation of the overtime component of the survey. These improvements resulted in an increase in job vacancy estimates for the private sector. There was negligible change to public sector estimates. Consequently, private sector estimates prior to November 1999 were adjusted to provide a comparable and compatible time series.
- **19** To account for the New Tax System changes described in paragraphs 9 to 16, the historical series from May 2002 back to November 1983 have been revised to make the time series of estimates as continuous as possible.
- **20** From November 2003, number of employees is no longer collected in JVS. Consequently job vacancy rates (see Glossary) are no longer presented in this publication. Job vacancy rates can be derived based on estimates of the number of employees from the Labour Force Survey.
- **21** The privatisation of Telstra Corporation in November 2006 impacted on the private sector and public sector job vacancies series. For the purposes of ABS statistics this change from public sector to private sector was effective from March quarter 2007. For more information please see **Information Paper: Future Treatment of Telstra in ABS Statistics, 2007** (cat. no. 8102.0), released 26 February 2007.
- **22** Although the privatisation of Telstra Corporation has impacted on both private and public sector series, the effect was significant only for the public sector series. As a result, a trend break was applied to the public sector series between November 2006 and February 2007. See paragraphs 23 to 32 for more information about seasonally adjusted and trend estimates.

## **SEASONAL ADJUSTMENT**

- 23 Seasonal adjustment is a means of removing the estimated effects of normal seasonal variation from the series so that the effects of other influences can be more clearly recognised. Seasonal adjustment does not aim to remove the irregular or non-seasonal influences which may be present in any particular series. Influences that are volatile or unsystematic can still make it difficult to interpret the movement of the series even after adjustment for seasonal variation. This means that quarter-to-quarter movements of seasonally adjusted estimates may not be reliable indicators of trend behaviour.
- **24** JVS uses the concurrent seasonal adjustment method to derive seasonal factors. Concurrent seasonal adjustment uses data up to and including the current quarter to estimate seasonal factors for the current and all previous quarters. This process can result in revisions each quarter to estimates for earlier periods. However, in most instances, the only noticeable revisions will be to the seasonally adjusted estimates for the previous

quarter and one year prior to the current quarter.

- **25** JVS also uses Autoregressive Integrated Moving Average (ARIMA) modelling, which generally results in a reduction in revisions to seasonally adjusted and trend estimates when subsequent data become available. For more information on ARIMA modelling see **Feature article: Use of ARIMA modelling to reduce revisions** in the October 2004 issue of **Australian Economic Indicators** (cat. no. 1350.0).
- **26** While seasonal factors for the complete time series are estimated each quarter, they are reviewed annually at a more detailed level to take into account each additional year's original data. The annual review is conducted on data up to and including August each year, with the results reflected in estimates released in the November issue of this publication. This annual review normally does not result in significant changes to previously published data. The ARIMA model is also reassessed as part of the annual review.
- **27** Further details about the method of seasonal adjustment of these series are available on request.

#### TREND ESTIMATES

- **28** Seasonally adjusted estimates can be smoothed to reduce the impact of irregular or non-seasonal influences. Smoothed seasonally adjusted series are called trend estimates.
- **29** The ABS considers that trend estimates provide a more reliable guide to the underlying direction of the data, and are more suitable than either the seasonally adjusted or original estimates for most business decisions and policy advice.
- **30** Trend estimates, obtained by dampening out the irregular component from the seasonally adjusted series, are calculated using a centred 7-term Henderson moving average of the seasonally adjusted series. Estimates for the three most recent quarters cannot be calculated using this centred average method; instead an asymmetric average is used. This can lead to revisions in the trend estimates for the last three quarters when data become available for later quarters. Revisions of trend estimates will also occur with revisions to the original data and re-estimation of seasonal adjustment factors.
- **31** If a series is highly volatile then the trend estimates will be subject to greater revision for the latest few quarters as new data become available. However, it is important to note that this does not make the trend series inferior to the seasonally adjusted or original series.
- **32** For more information, refer to **Information Paper: A Guide to Interpreting Time Series Monitoring Trends** (cat. no. 1349.0), or alternatively contact the Assistant Director, Time Series Analysis on (02) 6252 6345 or email <time.series.analysis@abs.gov.au>.

**33** Where figures have been rounded, discrepancies may occur between sums of the component items and totals. Percentages in this publication are calculated using unrounded numbers and consequently could differ from percentages that are calculated from the published rounded statistics.

#### **RELATED PUBLICATIONS**

**34** The following publications contain related information:

- Australian Labour Market Statistics (cat. no. 6105.0) issued quarterly
- Average Weekly Earnings, Australia (cat. no. 6302.0) issued quarterly
- Employee Earnings and Hours, Australia (cat. no. 6306.0) issued biennially
- Information Paper: Future Treatment of Telstra in ABS Statistics, 2007 (cat. no. 8102.0) issued 26 February 2007
- Information Paper: Improvements in ABS Economic Statistics [Arising from The New Tax System] (cat. no. 1372.0) issued 6 May 2002
- Labour Force, Australia (cat. no. 6202.0) issued monthly
- Labour Statistics: Concepts, Sources and Methods (cat. no. 6102.0.55.001)
- Wage and Salary Earners, Public Sector, Australia (cat. no. 6248.0.55.001) issued quarterly (final issue 13 September 2007)

**35** Current publications and other products released by the ABS are listed in the **Catalogue of Publications and Products** (cat. no. 1101.0). The Catalogue is available from any ABS office or the ABS web site. The ABS also issues a daily Release Advice on the web site which details products to be released in the week ahead.

# **Glossary**

## **GLOSSARY**

#### Industry

Industry is classified according to the Australian and New Zealand Standard Industrial Classification (ANZSIC), 1993 (cat. no. 1292.0).

## Job vacancy

A job vacancy is a job available for immediate filling on the survey reference date and for which recruitment action had been taken. Recruitment action includes efforts to fill vacancies by advertising, by factory notices, by notifying public or private employment agencies or trade unions and by contacting, interviewing or selecting applicants already registered with the enterprise or organisation. Excluded are vacancies:

- for jobs which became vacant on the survey date and were filled that same day
- for jobs of less than one day's duration
- to be filled by persons already hired, or by promotion or transfer of existing employees
- to be filled by employees returning from paid or unpaid leave or after industrial

dispute(s)

- not available for immediate filling on the survey reference date
- not available within the particular state or territory to which the return relates
- for work to be carried out by contractors
- for which no recruitment action has been taken
- where a person has been appointed but has not yet commenced duty
- to be filled by staff from contract labour agencies
- for jobs available only to persons already employed by the enterprise or organisation.

## Job vacancy rate

The job vacancy rate is calculated by expressing the number of job vacancies as a percentage of the number of employee jobs plus the number of job vacancies.

#### Reference date

The reference date for the survey is the third Friday of the middle month of the quarter.

#### **Sector**

Public sector includes all local government authorities and government departments, agencies and authorities created by, or reporting to the Commonwealth Parliament and state/territory parliaments. All remaining employees are classified as private sector.

# **Abbreviations**

### **ABBREVIATIONS**

The following symbols and abbreviations are used in this publication:

ABN Australian Business Number
ABS Australian Bureau of Statistics

ANZSIC Australian and New Zealand Standard Industrial Classification

ATO Australian Taxation Office PAYGW pay-as-you-go withholding

TAU type of activity unit

# **Sampling Error (Technical Note)**

**TECHNICAL NOTE SAMPLING ERROR** 

**RELIABILITY OF ESTIMATES** 

- **1** As the estimates in this publication are based on information relating to a sample of employers rather than a full enumeration, they are subject to sampling variability. That is, they may differ from the estimates that would have been produced if the information had been obtained from all employers. This difference, called **sampling error**, should not be confused with inaccuracy that may occur because of imperfections in reporting by respondents or in processing by the ABS. Such inaccuracy is referred to as non-sampling error and may occur in any enumeration whether it be a full count or sample. Efforts have been made to reduce non-sampling error by careful design of questionnaires, detailed checking of returns and quality control of processing.
- 2 The sampling error associated with any estimate can be estimated from the sample results. One measure of sampling error is given by the **standard error** which indicates the degree to which an estimate may vary from the value which would have been obtained from a full enumeration (the 'true value'). There are about two chances in three that a sample estimate differs from the true value by less than one standard error, and about 19 chances in 20 that the difference will be less than two standard errors.
- **3** An example of the use of a standard error on levels is as follows. If the estimated number of job vacancies was 25,000 with a standard error of 2,500, then there would be about two chances in three that a full enumeration would have given an estimate in the range 22,500 to 27,500 and about 19 chances in 20 that it would be in the range 20,000 to 30,000.
- **4** An example of the use of a standard error for a quarterly change estimate is as follows. If the estimated standard error for a quarterly change estimate of job vacancies was 1,000 and the quarterly change estimate between two quarters was 4,500, then there would be about two chances in three that a full enumeration would have given a quarterly change estimate in the range +3,500 to +5,500 and about 19 chances in 20 that it would be in the range +2,500 to +6,500.
- **5** Quarterly movements in estimates of job vacancies are considered to be statistically significant where they exceed two standard errors.
- **6** Another measure of the sampling error (for level estimates only) is the **relative standard error**, which is obtained by expressing the standard error as a percentage of the estimate to which it refers. Level estimates with a relative standard error between 25% and 50%, denoted by an asterisk in this publication, are subject to sampling variability generally considered to be too high for most practical purposes and should be used with caution. Level estimates with a relative standard error of 50% or more, denoted by a double asterisk, are considered to be too unreliable for general use.
- **7** The following table shows the standard errors for quarterly level and movement for States and territories by sector, based on original data for the current quarter. The next table shows the standard errors for level estimates by industry.

## STANDARD ERRORS, Job vacancies, Sector - States and territories - November 2007

L	EVEL		QUARTERL	Y MOVEME	NT
Private	Public	Total	Private	Public	Total
'000	'000	'000	'000	'000	'000

New South Wales	4.5	0.4	4.5	5.0	0.5	5.0
Victoria	3.2	0.3	3.3	3.8	0.3	3.8
Queensland	3.5	0.1	3.5	3.5	0.2	3.5
South Australia	1.4	0.2	1.4	1.5	0.2	1.5
Western Australia	2.9	0.3	3.0	3.8	0.3	3.8
Tasmania	0.4	0.1	0.4	0.4	0.1	0.5
Northern Territory	0.5	-	0.5	0.5	0.1	0.5
Australian Capital Territory	0.7	0.2	0.7	0.7	0.1	0.7
Australia	7.4	0.7	7.4	8.4	0.7	8.4

<sup>-</sup> nil or rounded to zero (including null cells)

# STANDARD ERRORS, Job vacancies - Industry

	20	006		2007			
	August	November	February	May	August	November	
	'000	'000	'000	'000	'000	'000	
Mining	0.3	0.2	0.3	0.3	0.4	0.7	
Manufacturing	2.5	2.5	2.8	2.2	2.1	2.4	
Electricity, gas and water supply	0.1	-	0.1	-	-	0.1	
Construction	1.5	1.3	2.0	1.8	1.9	1.4	
Wholesale trade	2.0	2.0	2.1	1.5	1.9	1.2	
Retail trade	3.3	2.8	2.7	2.5	2.7	3.1	
Accommodation, cafes and restaurants	1.3	2.0	2.0	2.0	1.3	2.4	
Transport and storage	0.7	0.7	0.9	0.8	0.7	0.7	
Communication services	0.3	0.3	0.3	0.6	0.9	1.2	
Finance and insurance	1.6	1.2	1.3	1.6	1.2	1.3	
Property and business services	5.0	4.4	5.3	4.3	5.0	4.4	
Government administration and defence	0.6	0.5	0.6	0.5	0.3	0.4	
Education	8.0	0.4	0.4	0.4	0.7	0.7	
Health and community services	1.9	1.9	2.7	2.4	2.1	2.1	
Cultural and recreational services	1.0	0.6	0.3	0.6	0.5	0.7	
Personal and other services	1.1	1.6	1.1	1.5	1.2	1.2	
All industries	7.8	7.2	8.2	7.1	7.5	7.4	

<sup>-</sup> nil or rounded to zero (including null cells)

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